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ART UNIT	**PAPER NUMBER**
1637	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/645,471	EBBINGHAUS ET AL.	
	Examiner	Art Unit	
	Angela Bertagna	1637	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 April 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5,7-11,19-21 and 27-31* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *27,28,30 and 31* is/are allowed.

6)☒ Claim(s) *1,3,5,7-11,19-21 and 29* is/are rejected.

7)☒ Claim(s) *2* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Status of the Application

1. Applicant's response filed April 2, 2007 is acknowledged. Claims 1-3, 5, 7-11, 19-21, and 27-31 are currently pending. In the response, claims 1, 2, 5, and 19 were amended, and claims 4, 6, 12-18, and 22-26 were cancelled. The indicated allowability of claim 29 is withdrawn, because upon further consideration, the claim is not directed to statutory subject matter (see section 2 below). Also, this claim is anticipated by the newly discovered reference to GenBank® GI: 927059 (09-April-1996 [online], [retrieved on June 4, 2007], retrieved from the Internet: <URL: www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=nuccore&id=927059) as evidenced by Benson et al. (Nucleic Acids Research (2000) 28(1): 15-18). Rejections based on the newly cited reference(s) follow in section 3. This Office Action is made non-final.

Claim Rejections - 35 USC § 101

2. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 29 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 29 is drawn to a process for identifying a nucleotide sequence capable of forming a quadruplex structure. The method comprises "identifying in a database a subset of nucleotide sequences comprising SEQ ID NO: 16." A statutory process must include a final resulting step of a physical transformation, or produce a useful, concrete, and tangible result (State Street Bank & Trust Co. v. Signature Financial Group Inc. CAFC 47 USPQ2d 1596 (1998), AT&T Corp. v.

Excel Communications Inc. (CAFC 50 USPQ2d 1447 (1999)). See also MPEP 2106, which states, "Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work. Benson, 409 U.S. at 67, 175 USPQ at 675." The method recited in claim 29 does not result in a physical transformation as it only requires a mental process of "identifying", and therefore, it must be determined whether or not the instant claims include a useful, concrete, and tangible result.

As noted in State Street Bank & Trust Co. v. Signature Financial Group Inc. CAFC 47 USPQ2d 1596 (1998) below, the statutory category of the claimed subject matter is not relevant to a determination of whether the claimed subject matter produces a useful, concrete, and tangible result:

The question of whether a claim encompasses statutory subject matter should not focus on *which* of the four categories of subject matter a claim is directed (process, machine, manufacture, or composition of matter), but rather on the essential characteristics of the subject matter, in particular, its practical utility. 35 U.S.C. 101 specifies that statutory subject matter must also satisfy the other "conditions and requirements" of Title 35, including novelty, nonobviousness, and adequacy of disclosure and notice. *See In re Warmerdam*, 33 F.3d 1354, 1359, 31 USPQ2d 1754 (Fed. Cir. 1994).

In determining if the claimed subject matter produces a useful, concrete, and tangible result, the Examiner must determine each standard individually. For a claim to be "useful," the claim must produce a result that is specific, and substantial. For a claim to be "concrete," the process must have a result that is reproducible. For a claim to be "tangible," the process must

produce a real world result. Furthermore, the claim must be limited only to statutory embodiments.

Although the method of claim 29 produces a useful and concrete result (identification of a particular nucleotide sequence), the result is not a tangible, real-world result. A tangible result requires that the claim set forth a practical application to produce a real-world result. Claim 29 results in only identification of a sequence comprising the instant SEQ ID NO: 16. The process recited in claim 29 only requires the mental process of identifying the sequence, and therefore, does not produce a tangible, real-world result. Also, as noted in MPEP 2106, "Phenomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work." Benson, 409 U.S. at 67, 175 USPQ at 675." Since claim 29 is not directed to a statutory process it has been rejected under 35 U.S.C. 101.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 29 is rejected under 35 U.S.C. 102(b) as being anticipated by GenBank® GI: 927059 (09-April-1996 [online], [retrieved on June 4, 2007], retrieved from the Internet: <URL: www.ncbi.nlm.nih.gov/entrez/viewer.fcgi?db=nuccore&id=927059) as evidenced by Benson et al. (Nucleic Acids Research (2000) 28(1): 15-18; newly cited).

Regarding claim 29, GenBank® GI: 927059 comprises the complement of the instant SEQ ID NO: 16 (see alignment below). This GenBank® record also inherently teaches the sequence of the instant SEQ ID NO: 16, since the DNA molecule recited in the record is a double-stranded molecule. Furthermore, in making the above GenBank® record, the NCBI staff identified in a database a subset of nucleotide sequences comprising the instant SEQ ID NO: 16, because as noted in the "Comment" section of the record, the above sequence replaced gi: 807649. In replacing the previous sequence (gi: 807649) with the instant sequence (gi: 927059), the NCBI staff identified in a database a nucleotide sequence comprising the instant SEQ ID NO: 16. See also Benson et al. (page 16, column 2 – page 17, column 1) for further information about the curation of records by NCBI. Therefore, the method of claim 29 is anticipated by the GenBank® record cited above as evidenced by Benson.

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SEQ ID NO: 16       1 AGAGAAGAGGGGAGGAGGAGGAGGAGGAGAGGAGGAGGCGC 38
                      |||||||||||||||||||||||||||||||||||||||||
GI: 927059       2740 AGAGAAGAGGGGAGGAGGAGGAGGAGGAGAGGAGGAGGCGC 2703
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Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 3, 5, 7, 10, 11, and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerwin et al. (US Patent No. 6,156,763; cited previously) in view Matsugami et al. (Journal of Molecular Biology (October 2001) 313(2): 255-269; cited previously). Kerwin teaches a method of identifiying quadruplex-interacting molecules (see abstract).

Regarding claim 1, Kerwin teaches a method for identifying a molecule that modulates transcription, comprising:

(a) providing a quadruplex DNA and a candidate quadruplex DNA-binding molecule (column 2, line 66 – column 3, line 2; see also column 3, lines 10-13)

(b) contacting the quadruplex DNA with the candidate quadruplex DNA-binding molecule (column 2, line 66 – column 3, line 2; see also column 3, lines 10-13), whereby the contacting occurs in a cell (see column 16, lines 30-45, column 20, lines 22-36, and Example 9, column 25, lines 38-67)

(c) determining the presence or absence of an interaction between the candidate quadruplex DNA-binding molecule and the quadruplex DNA, whereby the candidate molecule that interacts with the quadruplex DNA is identified as a molecule that modulates transcription

(column 2, line 66 – column 3, line 2 teach determination of an interaction; column 10, lines 15-19 teach that quadruplex DNA structures modulate transcription)

Regarding claim 3, Kerwin teaches that the quadruplex DNA comprises a native quadruplex DNA sequence (column 10, lines 44-55).

Regarding claim 5, Kerwin teaches that the quadruplex DNA comprises a gene transcription regulatory nucleotide sequence in native quadruplex DNA (column 10, lines 44-55).

Regarding claim 7, Kerwin teaches that the quadruplex DNA comprises a mutation that hinders formation of another quadruplex conformation (column 28, lines 27-48).

Regarding claim 10, Kerwin teaches that the interaction is assayed by a Taq polymerase arrest assay (Example 4, column 23, lines 18-54).

Regarding claim 11, Kerwin teaches that the interaction is a binding interaction (Example 6, column 24, lines 24-58).

Regarding claim 19, Kerwin teaches a method for identifying the presence or absence of a quadruplex structure in a nucleic acid of a sample, comprising:

(a) providing a sample comprising a nucleic acid and a quadruplex-interacting agent (see Example 9, column 25, lines 39-55, where the quadruplex interacting agent is KeTEL01)

(b) contacting the sample with the quadruplex-interacting agent, whereby the contacting occurs in a cell (column 25, lines 39-43)

(c) detecting the presence or absence of an interaction between the nucleic acid quadruplex structure and the quadruplex-interacting agent, whereby the presence of an

interaction is indicative of the quadruplex structure in the nucleic acid (column 25, lines 39-55, where the presence of an interaction is measured by the cytotoxicity assay)

Regarding claim 20, Kerwin teaches that the quadruplex-interacting agent comprises TMPyP4 or telomestatin (column 24, lines 13-14).

Regarding claims 1, 19, and 21, Kerwin teaches quadruplex molecules other than the instantly claimed $(GGA)_3GG$. Kerwin also does not teach that the quadruplex DNA molecules are in a heptad/tetrad conformation.

Regarding claims 1, 19,and 21, Matsugami et al. teaches the structure of a quadruplex of $(GGA)_4$ in a heptad/tetrad conformation (abstract). The sequence was incubated in solutions containing physiological concentrations of potassium ions (100 mM) and in solutions lacking potassium ions and the resulting NMR spectra were compared (see Figure 1 and discussion on page 256).

It would have been prima facie obvious for one of ordinary skill in the art at the time of invention to use the $(GGA)_4$ quadruplex, which comprises the sequence $(GGA)_3GG$, in the heptad/tetrad conformation taught by Matsugami in the compound screening method taught by Kerwin. The method taught by Kerwin was particularly directed to identifying quadruplex-interacting compounds in order to treat a range of disorders suspected to involve quadruplex DNA structures (column 2, lines 45-56, column 16, lines 47-59, column 18, lines 56-61, and column 29, lines 60 – column 30 line 11 of Kerwin). An ordinary practitioner would have been

motivated by these teachings of Kerwin to utilize any known quadruplex DNA sequence, such as the sequence taught by Matsugami, in the screening method taught by Kerwin in order to expand the ability of the method to identify therapeutically useful compounds for treating diseases related to quadruplex DNA formation. An ordinary practitioner would also have been motivated by the teachings of Kerwin to use the $(GGA)_3GG$ quadruplex in a native heptad/tetrad conformation, since Matsugami taught that this was the biologically relevant conformation of the quadruplex. An ordinary practitioner of the method taught by Kerwin would have recognized that using the quadruplex DNA in the native biological conformation taught by Matsugami would provide more accurate information regarding the potential ability of the screened candidate compounds to bind quadruplex DNA in vivo. Therefore, the methods of claims 1, 3, 5, 7, 10, 11, and 19-21 are prima facie obvious in view of the combined teachings of Kerwin and Matsugami.

6. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kerwin et al. (US Patent No. 6,156,763; cited previously) in view Matsugami et al. (Journal of Molecular Biology (October 2001) 313(2): 255-269; cited previously) and further in view of Williams et al. (Analytical Biochemistry (1989) 176: 28-32; cited previously).

The combined teachings of Kerwin and Matsugami result in the method of claim 1, as discussed above.

Neither of the above references teaches that the quadruplex DNA is coupled to a luciferase reporter system.

Willaims teaches the use of firefly luciferase as a reporter gene for monitoring expression in transfected cells (see abstract). Williams stated, "The luciferase system is a simple, rapid, and sensitive method for the study of promoter activity in transfected cells (see abstract)."

It would have been prima facie obvious for one of ordinary skill in the art at the time of invention to utilize a luciferase reporter system as taught by Williams to monitor the effect of the candidate compounds on the expression of the targeted quadruplex DNA molecules. Kerwin expressly taught monitoring the effect of the candidate compounds in transfected cells, but measured growth rather than expression level (see column 20, lines 22-36 and Example 9 at column 25, lines 39-67). An ordinary practitioner would have been motivated to monitor expression alternatively or in addition to monitoring cell growth in order to obtain a more accurate and complete measure of the effect of the compounds on the quadruplex structure. In particular, an ordinary practitioner would have been motivated to monitor expression using the luciferase reporter system, since Williams taught that the system was fast, simple and highly sensitive. Therefore, the methods of claims 8 and 9 are prima facie obvious in view of the combined teachings of Kerwin, Matsugami, and Williams.

Double Patenting

7. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re*

Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

8. Claims 1, 3, 5, 7-11, 19, and 21 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 93, 94, 96, 99-103 of copending Application No. 10/407,449 in view of Matsugami et al. (Journal of Moleuclar Biology (October 2001) 313: 255-269).

Claim 103 of the '449 application recites the limitations of steps (a)-(c) of the instant claims 1 and 19 except for the requirement that the quadruplex DNA is in a heptad/tetrad conformation and the requirement that the quadruplex comprises $(GGA)_3GG$. Claim 93 of the '449 application recites that the quadruplex used in the method of claim 103 comprises a sequence selected from the generic formula $(G_aX_b)_cG_a$, where a is an integer between 2-6, b is an integer between 1-4, and c equals 3. Therefore, claim 93 of the '449 application teaches the instantly claimed sequence of $(GGA)_3GG$, because this sequence is immediately apparent upon viewing the generic formula recited. As noted in MPEP 2131.02, "When the compound is not specifically named, but instead it is necessary to select portions of teachings within a reference and combine them, e.g., select various substituents from a list of alternatives given for placement at specific sites on a generic chemical formula to arrive at a specific composition, anticipation can only be found if the classes of substituents are sufficiently limited or well delineated. Ex

parte A, 17 USPQ2d 1716 (Bd. Pat. App. & Inter. 1990). If one of ordinary skill in the art is able to "at once envisage" the specific compound within the generic chemical formula, the compound is anticipated. One of ordinary skill in the art must be able to draw the structural formula or write the name of each of the compounds included in the generic formula before any of the compounds can be 'at once envisaged.'"

Claim 94 of the '449 application recites the limitations of the instant claim 3.

Claim 103 of the '449 application recites the limitations of the instant claim 5.

Claim 96 of the '449 application recites the limitations of the instant claim 7.

Claims 99-102 of the '449 application recite the limitations of the instant claims 8-11, respectively.

The claims of the '449 application do not recite that the quadruplex DNA is in a heptad/tetrad conformation as required by the instant claims 1, 19, and 21. However, this would have been obvious to an ordinary practitioner based on the teachings of Matsugami. As discussed in greater detail above, Matsugami taught that the quadruplex $(GGA)_4$, which comprises the sequence $(GGA)_3GG$, existed in a heptad/tetrad conformation under physiological conditions (see abstract, Figure 1, and the associated discussion on page 256). An ordinary practitioner would have been motivated to use the $(GGA)_3GG$ quadruplex in a native heptad/tetrad conformation, since Matsugami taught that this was the biologically relevant conformation of the quadruplex. An ordinary practitioner of the method recited in the claims of the '449 application would have recognized that using the quadruplex DNA in the native biological conformation taught by Matsugami would provide more accurate information regarding the potential ability of the screened candidate compounds to bind quadruplex DNA in

vivo. Thus, the methods of claims 1, 3, 5, 7-11, 19, and 21 are prima facie obvious over claims 93, 94, 96, 99-103 of the '449 application in view of Matsugami.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

9. Claims 27, 28, 30, and 31 are allowed.

Claim 2 contains allowable subject matter, specifically the elected SEQ ID NO: 16. This claim is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Amendment

10. The declaration under 37 CFR 1.130 filed April 2, 2007 is sufficient to overcome the rejection of claims 1, 3-11, and 19-21 under 103(a) as obvious over Siddiqui-Jain in view of Matsugmai, since the declaration disqualifies the Siddiqui-Jain reference as prior art under 103(c).

Response to Arguments

10. Claim Objections

The objection to claim 2 has been maintained, because the claim depends from a rejected base claim. Regarding the issue of non-elected sequences comprising the nucleotide sequence $(GGA)_3GG$ recited in claim 2, cancellation of these sequences may avoided by requiring a combination of allowable SEQ ID NO: 16 and any of the non-elected sequences (e.g. as in allowable claims 27 and 28). Applicant's amendments overcome the objection to claim 5, and therefore, it has been withdrawn. Claims 22 and 25 were canceled in the response, and therefore the previous objection is moot. Applicant's arguments, see page 7, filed April 2, 2007, with respect to the objection to claim 28 have been fully considered and are persuasive. This objection has been withdrawn.

Rejections under 35 U.S.C. 102(e)

Applicant's arguments, see page 8, filed April 2, 2007, with respect to claims 22-26 have been fully considered and are persuasive. Applicant has cancelled claims 22-26. Therefore, the rejection of these claims under 35 U.S.C. 102(e) as anticipated by Siddiqui-Jain et al. is moot and has been withdrawn.

Rejections under 35 U.S.C. 103(a)

As noted above, Applicant's declaration disqualifies Siddiqui-Jain as prior art under 103(c). Therefore, the rejection of claims 1, 3-11, and 19-21 under 35 U.S.C. 103(a) as obvious of Siddiqui-Jain in view of Matsugami has been withdrawn.

Regarding the rejection of claims 1, 3-7, 10, 11, and 19-21 under 35 U.S.C. 103(a) as obvious over Kerwin in view of Matsugami, Applicant's arguments filed April 2, 2007 have been fully considered but they are not persuasive. Applicant argues that the combination of these references do not teach the new limitation in claims 1 and 19 that requires the contacting of the quadruplex DNA and the candidate quadruplex DNA-binding molecule to occur in a cell (see page 9). This argument was not found persuasive, because as discussed above, Kerwin teaches this step (see column 25, lines 38-67). Since the combined teachings of Kerwin and Matsugami result in methods of claims 1, 3, 5, 7, 10, 11, and 19-21, the rejection is maintained.

Regarding the rejection of claims 8 and 9, Applicant's arguments filed April 2, 2007 have been fully considered but they are not persuasive. Applicant argues that the Williams reference does not cure the deficiencies in the combination of Kerwin and Matsugami (see page 10). This argument was not found persuasive, because as discussed above, the combination of Kerwin and Matsugami teaches all of the limitations of the instant claims 1, 3, 5, 7, 10, 11, and 19-21. Williams is only relied upon for teachings relevant to claims 8 and 9. Accordingly, the rejection is maintained.

Regarding the rejection of claims 22-26 under 35 U.S.C. 103(a), Applicant's cancellation of these claims renders the rejections moot, and therefore, they have been withdrawn.

Regarding the provisional obviousness-type double patenting rejection citing application 10/407,449, Applicant requests to consider this provisional rejection upon allowance of claims (see page 10). As noted in MPEP 804, "The 'provisional' double patenting rejection should continue to be made by the examiner in each application as long as there are conflicting claims in more than one application unless that 'provisional' double patenting rejection is the only

rejection remaining in at least one of the applications." Since the provisional obviousness-type double patenting rejection is not the only rejection remaining in either the instant case or the copending '449 application, the rejection is maintained.

Conclusion

Claims 1, 3, 5, 7-11, 19-21, and 29 are rejected. Claim 2 is objected to. Claims 27, 28, 30, and 31 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela Bertagna whose telephone number is 571-272-8291. The examiner can normally be reached on M-F, 7:30 - 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gary Benzion can be reached on 571-272-0782. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Angela Bertagna
Art Unit 1637
June 5, 2007

amb

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